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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,114	12/12/2003	ChiaHua Ho	MXICP024	1904
25920	7590	04/15/2005	EXAMINER	
MARTINE PENILLA & GENCARELLA, LLP			LE, THONG QUOC	
710 LAKEWAY DRIVE			ART UNIT	
SUITE 200			PAPER NUMBER	
SUNNYVALE, CA 94085			2827	

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

Office Action Summary	Application No. 10/735,114	Applicant(s) HO ET AL.	
	Examiner Thong Q. Le	Art Unit 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-11 and 13-20 is/are rejected.
- 7) ☒ Claim(s) 7, 8 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Specification

2. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

3. The drawings were received on 05/28/2004. These drawings are Figures 1-13.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6,9-11,13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwasaki et al. (U.S. Patent No. 6,483,741).

Regarding claims 1, 16-20, Iwashaki et al. disclose a magnetic random access memory (MRAM) cell (Figure 8) , comprising:

a word line (Figure 8, 31);

a bit line (Figure 8, 32) perpendicular to the word line;

a magnetic device (Figure 12, 72) disposed at an intersection of the word line and the bit line; and

a pair of writing magnets (Figure 12, B, B'), each writing magnet disposed at an end of the magnetic device, wherein the pair of writing magnets switches a magnetic

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alignment of the magnetic device during a write operation (Column 26, lines 57-67, Column 27, lines 1-67).

Regarding claims 2-6,8-10,13-14, Iwasaki et al. disclose wherein a current in the word line and the bit line generates a magnetic field on the pair of writing magnets during the write operation (Column 19, lines 52-67), and wherein the pair of writing magnets and the magnetic device are aligned along a long axis of the memory cell (Figure 12), and wherein the long axis of the memory cell is not aligned with the word line and the long axis is not aligned with the bit line (Figure 8), and Iwasaki et al. disclose wherein the magnetic device includes a magnetic tunnel junction (MJT) (Column 16, lines 8-46), and wherein the magnetic device includes a giant magnetoresistance (GMR) material (Column 28, lines 40-56), and wherein each writing magnet includes a soft ferromagnetic material, and wherein each writing magnet includes a general ferromagnetic material (Column 16, lines 1-16).

Regarding claims 11, 13-15, the apparatus discussed above would perform the method claims 11,13-15.

Allowable Subject Matter

6. Claims 7-8, 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-8, 12 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the

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claimed limitations. Iwasaki et al. (U.S. Patent No. 6,483,741), and others, does not teach the claimed invention having a magnetic device includes a CMR or AMR material, and the current applied to the word line and the bit line is on an order of magnitude of 100 μ A.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai V. Ho can be reached on 571-272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le
Primary Examiner
Art Unit 2827

THONG LE
PRIMARY EXAMINER